

Tennessee Pollution Prevention Partnership Success Story



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Daikin Eliminates Erosion and Flooding

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The Member

Daikin Drivetrain Components Corporation (DDC) is a world-class producer of torque converters for the U.S. automotive industry. DDC operates a 333,000 square foot facility located on 108 acres at the foothills of the Great Smoky Mountains. Nearly 300 DDC employees are involved in such processes as tool and die, stamping, heat treatment, machining and assembly, and rebuild operations. DDC currently produces torque converters for Ford and Nissan. In 2002, DDC expanded its manufacturing facility by 96,000 square feet and is projected to produce more 1,000,000 units in 2004.



The Story

DDC continually strives to reduce its environmental impact on the community. DDC chose to address a land erosion issue on its site as well as its affect on the storm water drainage within the business park where DDC is located. Over the past 6 years the storm water discharge had created some land erosion. There were also times where the business park experienced flash flooding at the park entrance. DDC experienced some sinkhole problems due to improper storm water flow. The countermeasure we determined to be the most efficient was to construct a controlled drainage system on our site. DDC had a 10 foot wide concrete drainage swale constructed along the rear of the plant to direct stormwater to a

newly constructed retention pond on the corner of its property. The retention pond is designed to control the discharge of storm water off the site. This plan will help control the large amounts of storm water that once exited the site. The final phase of this project consisted of hydro-seeding the bank behind the drainage swale to reduce the erosion of the soil



The Success

Since the construction was completed, DDC hasn't experienced erosion problems. Along with our contribution, Knox County and the State of Tennessee financed construction of the concrete swale to the park entrance. The project has eliminated the flash flooding that was previously experienced and the cost of replacing the topsoil and vegetation lost due to erosion.

The Pollution Prevented

EPA has identified sediment as the greatest cause of stream pollution. Uncontrolled erosion deposits sediment in waterways, which greatly diminishes water quality and is detrimental to aquatic plants and animals. The sediment suffocates gill-bearing organisms and deprives aquatic plants of sunlight necessary for photosynthesis.

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